Amendments to the Claims:

The listing of claims below will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A composite polyamide reverse osmosis membrane comprising:

(a) a microporous support;

(b) a polyamide layer on said microporous support; and

(c) a hydrophilic coating on said polyamide layer, said hydrophilic coating being made by (i) applying to the polyamide layer a quantity of a polyfunctional epoxy compound, said polyfunctional epoxy compound comprising at least three epoxy groups, and (ii) then, cross-linking the polyfunctional epoxy compound in such a manner as to yield a water-insoluble polymer, wherein said polyfunctional epoxy compound is cross-linked through at least one of self-polymerization and the help of a cross-linking compound, said cross-linking compound differing from said polyamide layer.

2. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 1 wherein said microporous support is made of a material selected from the group consisting of a polysulfone, a polyether sulfone, a polyimide, a polyamide, a polyetherimide, polyacrylonitrile, poly(methyl methacrylate), polyethylene, polypropylene and a halogenated polymer.

3. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 1 wherein said polyamide layer is the interfacial reaction product of a polyfunctional amine and a polyfunctional amine-reactive reactant.

4. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 3 wherein said polyfunctional amine is at least one member selected from the group consisting of an aromatic primary diamine and substituted derivatives thereof, an alkane primary diamine, a cycloaliphatic primary diamine, a cycloaliphatic secondary diamine, an aromatic secondary diamine and a xylylene diamine.

5. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 4 wherein said polyfunctional amine is meta-phenylenediamine.

6. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 4 wherein said polyfunctional amine is piperazine.

7. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 3 wherein said polyfunctional amine-reactive reactant is at least one member selected from the group consisting of a polyfunctional acyl halide, a polyfunctional sulfonyl halide and a polyfunctional isocyanate.

8. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 7 wherein said polyfunctional amine-reactive reactant is trimesoyl chloride.

Claim 9 (Canceled).

10. (Currently amended) ~~The~~ A composite polyamide reverse osmosis membrane ~~as claimed in claim 1~~ comprising:

(a) a microporous support;

(b) a polyamide layer on said microporous support; and

(c) a hydrophilic coating on said polyamide layer, said hydrophilic coating being made by (i) applying to the polyamide layer a quantity of a polyfunctional epoxy compound, wherein

said polyfunctional epoxy compound is at least one member selected from the group consisting of ~~glycerol triglycidyl ether;~~ diglycerol triglycidyl ether; pentaerythritol triglycidyl ether; sorbitol triglycidyl ether; glycerol propoxylate triglycidyl ether; trimethylolpropane triglycidyl ether; 1,1,1-tris(hydroxymethyl)ethane triglycidyl ether; 1,1,1-tris(hydroxyphenyl)ethane triglycidyl ether; tris(hydroxymethyl)nitromethane triglycidyl ether; ~~tris(2,3-epoxypropyl)isocyanurate;~~ phloroglucinol triglycidyl ether; ~~N,N-diglycidyl-4-glycidyloxyaniline;~~ a reaction product of epichlorohydrin and 1,3,5,-tris(2-hydroxyethyl)cyanuric acid; a reaction product of epichlorohydrin and tris(hydroxymethyl)amino methane; sorbitol tetraglycidyl ether; pentaerythritol tetraglycidyl ether; polyglycerol tetraglycidyl ether; sorbitol pentaglycidyl ether; sorbitol hexaglycidyl ether; polyglycerol polyglycidyl ether; ~~a reaction product of polyvinyl alcohol and epichlorohydrin; a reaction product of polyvinyl phenol and epichlorohydrin; a reaction product of polyacrylamide and epichlorohydrin; a reaction product of epichlorohydrin and cellulose; and a reaction product of epichlorohydrin and a cellulose derivative~~ and (ii) then, cross-linking the polyfunctional epoxy compound in such a manner as to yield a water-insoluble polymer, wherein said polyfunctional epoxy compound is cross-linked through at least one of self-polymerization and the help of a cross-linking compound, said cross-linking compound differing from said polyamide layer.

11. (Previously presented) The composite polyamide reverse osmosis membrane as claimed in claim 1 wherein said polyfunctional epoxy compound is cross-linked through self-polymerization.

12. (Previously presented) The composite polyamide reverse osmosis membrane as claimed in claim 1 wherein said polyfunctional epoxy compound is cross-linked with the help of said cross-linking compound.

13. (Currently amended) The composite polyamide reverse osmosis membrane as claimed in claim 12 wherein said cross-linking compound comprises at least two epoxy-reactive groups selected from the group consisting of hydroxy groups; amino groups; ~~carboxyl groups; carboxylic acid anhydride groups;~~ amide groups; carbonyl groups; and sulfurhydryl (thiol) groups.

14. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 13 wherein said at least two epoxy-reactive groups are the same.

15. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 13 wherein said at least two epoxy-reactive groups are different.

16. (Currently amended) The composite polyamide reverse osmosis membrane as claimed in claim 13 wherein said cross-linking compound is at least one member selected from the group consisting of ethylene glycol; propylene glycol; 1,3-propanediol; 1,3-butanediol; 1,4-butanediol; 1,5-pentanediol; 1,2-pentanediol; 2,4-pentanediol; 1,6-hexanediol; 1,2-hexanediol; 1,5-hexanediol; 2,5-hexanediol; 2-ethyl-1,3-hexanediol; 1,7-heptanediol; 1,2-octanediol; 1,8-octanediol; 1,9-nonanediol; 1,10-decanediol; 1,2-decanediol; ~~1,12-dodecanediol; 1,2-dodecanediol;~~ glycerol; trimethylolpropane; 1,1,1-tris(hydroxymethyl)ethane; 1,1,1-tris(hydroxyphenyl)ethane; tris(hydroxymethyl)aminomethane; tris(hydroxymethyl)nitromethane; 1,3,5-tris(2-hydroxyethyl)cyanuric acid; pentaerythritol; sorbitol; glucose; fructose; maltose; mannose; glucosamine; mannosamine; a polysaccharide; neopentyl glycol; ~~dibromoneopentyl glycol;~~ hydroquinone, resorcinol; ~~bisphenol A; hydrogenated bisphenol A;~~ isocyanuric acid; phloroglucinol; ~~methylenebisaniline; polyvinyl alcohol;~~ polyvinyl phenol; polyacrylamide; ~~cellulose; ethylcellulose; methyl cellulose; hydroxypropyl cellulose; hydroxyethyl cellulose;~~ polyethylene glycol with the repeating ethylene glycol unit $(CH_2CH_2O)_n$ wherein n ranges from 2 to 400, inclusive; and

polypropylene glycol with the repeating ethylene glycol unit $((CH_3)CH_2CH_2O)_n$ wherein n ranges from 2 to 100, inclusive.

17. (Currently amended) The composite polyamide reverse osmosis membrane as claimed in claim 13 wherein said cross-linking compound is at least one member selected from the group consisting of ~~alkanediamines and their alkyl or aryl derivatives on nitrogens and backbone carbons of the types shown below:~~

$R_1R_2N(CH_2)_nNR_3R_4$ wherein n=2-12 and R_1, R_2, R_3 and R_4 are the same or different and are selected from the group consisting of ~~hydrogen,~~ methyl, ethyl, propyl, butyl, cyclohexyl and phenyl;

~~R_5~~

~~$R_1R_2N(CH_2)_nNR_3R_4$~~ $R_1R_2N(CH_2\text{-}\underset{\displaystyle R_5}{\underset{|}{CH}}\text{-}(CH_2)_m)_nNR_3R_4$ wherein m=0-3 and n=~~2-12~~1-4 and R_1, R_2, R_3, R_4 and R_5 are the same or different and are selected from the group consisting of ~~hydrogen,~~ methyl, ethyl, propyl, butyl, cyclohexyl, hydroxyl and phenyl;

~~Alicyclic diamines selected from the group consisting of~~ 2,2′-(ethylenedioxy)bis(ethylamine); diaminocyclohexane; 1,3-cyclohexanebis(methylamine); 4,4′-trimethylenedipiperidine; piperazine; 1,4-dimethylpiperazine; 1,4-diazabicyclo[2.2.2]octane; 1,8-diazabicyclo[5.4.0]undec-7-ene; 1,5-diazabicyclo[4.3.0]non-5-ene; ~~and~~

~~Aromatic diamines selected from the group consisting of~~ meta-phenylenediamine; meta-xylylenediamine; ~~and~~ bis(4-aminophenyl)sulfone; tris(2-aminoethyl)amine; N,N,N′,N′,N″-pentamethyldiethylenetriamine; 1,1,3,3-tetramethylguanidine; chitosan; and poly(allylamine).

Claim 18 (Canceled).

19. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 13 wherein said cross-linking compound is at least one member selected from the group consisting of tartaric acid; gluconic acid; glucuronic acid; 3,5-dihydroxybenzoic acid; 2,5-dihydroxybenzenesulfonic acid potassium salt; and 2,5-dihydroxy-1,4-benzenedisulfonic acid dipotassium salt.

20. (Original) The composite polyamide reverse osmosis membrane as claimed in claim 13 wherein said cross-linking compound is at least one member selected from the group consisting of 3,5-diaminobenzoic acid; 2-aminoethanesulfonic acid (taurine); 2-{[tris(hydroxymethyl)methyl]amino}-1-ethanesulfonic acid; 3-{[tris(hydroxymethyl)methyl]amino}-1-propanesulfonic acid; 2-hydroxy-3-{[tris(hydroxymethyl)methyl]amino}-1-propanesulfonic acid; β-hydroxy-4-(2-hydroxyethyl)-1-piperazinepropanesulfonic acid; β,β′-dihydroxy-1,4-piperazinebis(propanesulfonic acid); and 2,5-diaminobenzenesulfonic acid.

Claims 21-57 (Canceled).

58. (Previously presented) A microporous membrane comprising:

(a) a microporous support; and

(b) a hydrophilic coating directly on said microporous support, said hydrophilic coating being made by (i) applying to the microporous support a quantity of a polyfunctional epoxy compound, said polyfunctional epoxy compound comprising at least three epoxy groups, and (ii) then, cross-linking the polyfunctional epoxy compound in such a manner as to yield a water-insoluble polymer, wherein said polyfunctional epoxy compound is cross-linked through self-polymerization.

59. (Original) The microporous support as claimed in claim 58 wherein said microporous support is made of a material selected from the group consisting of a polysulfone, a polyether sulfone, a polyimide, a polyamide, a polyetherimide, polyacrylonitrile, poly(methyl methacrylate), polyethylene, polypropylene and a halogenated polymer.

60. (Original) The microporous support as claimed in claim 58 wherein said microporous support is a microfiltration membrane.

61. (Original) The microporous support as claimed in claim 58 wherein said microporous support is an ultrafiltration membrane.

Claims 62-70 (Canceled).

71. (Previously presented) The composite polyamide reverse osmosis membrane as claimed in claim 1 wherein said polyfunctional epoxy compound comprises at least four epoxy groups.

72. (Currently amended) The composite polyamide reverse osmosis membrane as claimed in claim 71 wherein said polyfunctional epoxy compound is at least one member selected from the group consisting of sorbitol tetraglycidyl ether; pentaerythritol tetraglycidyl ether; polyglycerol tetraglycidyl ether; sorbitol pentaglycidyl ether; sorbitol hexaglycidyl ether; polyglycerol polyglycidyl ether~~; a reaction product of polyvinyl alcohol and epichlorohydrin; a reaction product of polyvinyl phenol and epichlorohydrin; a reaction product of polyacrylamide and epichlorohydrin; a reaction product of epichlorohydrin and cellulose; and a reaction product of epichlorohydrin and a cellulose derivative~~.

73. (Currently amended) ~~The~~ A microporous membrane ~~as claimed in claim 58~~ comprising:

(a) a microporous support; and

(b) a hydrophilic coating directly on said microporous support, said hydrophilic coating being made by (i) applying to the microporous support a quantity of a polyfunctional epoxy compound, wherein said polyfunctional epoxy compound is at least one member selected from the group consisting of ~~glycerol triglycidyl ether;~~ diglycerol triglycidyl ether; pentaerythritol triglycidyl ether; sorbitol triglycidyl ether; glycerol propoxylate triglycidyl ether; trimethylolpropane triglycidyl ether; 1,1,1-tris(hydroxymethyl)ethane triglycidyl ether; 1,1,1-tris(hydroxyphenyl)ethane triglycidyl ether; tris(hydroxymethyl)nitromethane triglycidyl ether; ~~tris(2,3-epoxypropyl)isocyanurate;~~ phloroglucinol triglycidyl ether; ~~N,N-diglycidyl-4-glycidyloxyaniline;~~ a reaction product of epichlorohydrin and 1,3,5,-tris(2-hydroxyethyl)cyanuric acid; a reaction product of epichlorohydrin and tris(hydroxymethyl)amino methane; sorbitol tetraglycidyl ether; pentaerythritol tetraglycidyl ether; polyglycerol tetraglycidyl ether; ~~4,4'-methylenebis(N,N-diglycidylaniline);~~ sorbitol pentaglycidyl ether; sorbitol hexaglycidyl ether; polyglycerol polyglycidyl ether; ~~a reaction product of polyvinyl alcohol and epichlorohydrin; a reaction product of polyvinyl phenol and epichlorohydrin; a reaction product of polyacrylamide and epichlorohydrin; a reaction product of epichlorohydrin and cellulose; and a reaction product of epichlorohydrin and a cellulose derivative~~ and (ii) then, cross-linking the polyfunctional epoxy compound in such a manner as to yield a water-insoluble polymer, wherein said polyfunctional epoxy compound is cross-linked through self-polymerization.

74. (Previously presented) The microporous membrane as claimed in claim 58 wherein said polyfunctional epoxy compound comprises at least four epoxy groups.

75. (Currently amended) The microporous membrane as claimed in claim 74 wherein said polyfunctional epoxy compound is at least one member selected from the group consisting of sorbitol

tetraglycidyl ether; pentaerythritol tetraglycidyl ether; polyglycerol tetraglycidyl ether; ~~4,4'-methylenebis(N,N-diglycidylaniline);~~ sorbitol pentaglycidyl ether; sorbitol hexaglycidyl ether; polyglycerol polyglycidyl ether; a reaction product of polyvinyl alcohol and epichlorohydrin; a reaction product of polyvinyl phenol and epichlorohydrin; a reaction product of polyacrylamide and epichlorohydrin; a reaction product of epichlorohydrin and cellulose; and a reaction product of epichlorohydrin and a cellulose derivative.

Claims 76-78 (Canceled).